ERIOPHYID STUDIES C - 2

by H. H. Keifer, Collaborator

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ARS USDA

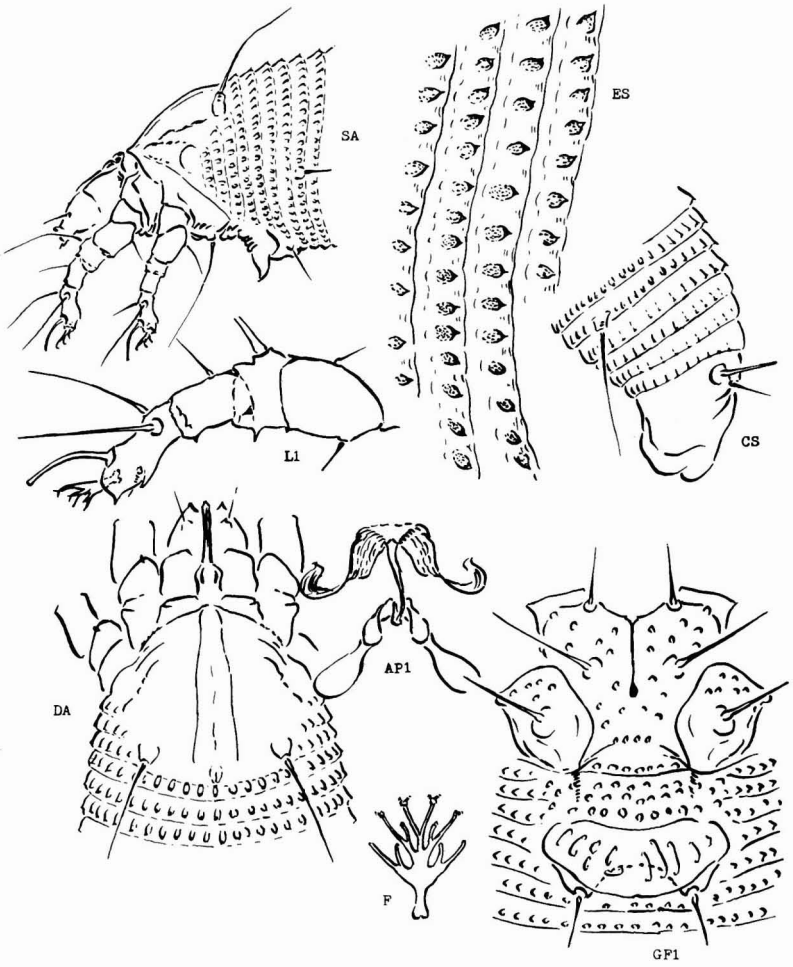

Plate 1 - Aceria ecantyx, new species

Issued- May 20, 1969

Aceria ecantyx, new species

Plate 1

This is a bud inhabitant on Quercus ilex in Portugal. It is closely related to Aceria ilicis (Can.). Ilicis forms erineum patches on the underside of the leaves of the same host throughout Europe and parts of Asia. The new species differs from ilicis by having pointed microtubercles, lacking submedian lines on the shield, but more importantly by the concave rear line between the setiferous genital tubercles. Ilicis lacks this concave line or emargination. The North American Aceria triplacis K. (Eriophyid Studies B-1:8, Nov. 17, 1960) makes erineum patches on Quercus alba leaves and also has this emargination at the rear of the genitalia. Triplacis differs from ecantyx by having rounded microtubercles. This triplacis may be a synonym of Garman's querci, named in the 1883 Report of the Illinois State Entomologist.

Female 160µ-200µ long, 42µ thick, wormlike in shape; color light yellowish-white. Rostrum 20µ long, projecting forward and curved down; antapical seta 5µ long. Shield 23µ long, 30µ wide, subtriangular in dorsal view. Median shield line faint, present only on rear part of shield; a short central line at rear margin enclosed by a pair of curved lines. Admedian lines complete and slightly sinuate, gradually diverging to rear. Submedian lines absent. Shield laterally with a pair of irregular longitudinal lines, an ocellar spot above rear coxa, and three partial rings below dorsal tubercle. Dorsal tubercles 17µ apart; dorsal setae 20µ long, somewhat diverging. Foreleg 30µ long; tibia 5µ long, with 7.5µ seta from 1/3; tarsus 9µ long; claw 8µ long; featherclaw 3-rayed, the first two rays obscurely divided apically. Hindleg 25µ long, tibia 4µ long, tarsus 7µ long, claw 8.5µ long. Coxae ornamented with sparse rounded granules; anterior coxae broadly joined along central line or apodeme; first setiferous coxal tubercles slightly farther apart than second and close to anterior end of forecoxae; second tubercles well ahead of third setiferous coxal tubercles. Abdominal thanosome with about 52 rings, completely set with microtubercles that bear a point or small spinule each, and set just ahead of ring margins. Lateral seta 21µ long, on ring 5; first ventral seta 31µ long, on ring 17; second ventral 7µ long, on ring 33. Telosome with 5 rings, the microtubercles weaker than anteriorly, somewhat elongate. Seta on first telosomal ring 20µ long. Accessory seta strong, 8µ long. Female genitalia 20µ wide, 12µ long; coverflap with about 10 longitudinal ribs that tend to be broadened; more or less irregular microtubercles just ahead of coverflap; genital seta 7.5µ long; line between setiferous tubercles arching anteriorly between these tubercles and touching spermathecal opening centrally.

Type locality: Evora, Portugal

Collected: May 2, 1967, by Maria Manuela Carmona of the Estacao Agronomica Nacional, Oeiras, Portugal

Host: Quercus ilex L. (Fagaceae) holly oak

Relation to host: the mites live in the buds

Type material; a type slide, with the above data, sent to Maria Manuela Carmona
a paratype slide retained by the author
a paratype slide sent to the Entomology Research Division Beltsville, Maryland

Aceria geoffraeae, new species

Plate 2

The principal distinguishing feature of this mite is the bulb-like thickening of the admedian shield lines just ahead of the rear margin. No other species of the genus has this particular feature. The large granules on the female genital coverflap are also distinctive.

Female 180μ-210μ long, 45μ thick; wormlike; color in life probably light yellowish-white. Rostrum 20μ long, curved down; antapical seta 5μ long. Shield 27μ long, 32μ wide, subtriangular in anterior outline. Shield design tending to be obscure, the lines of faint dashes. Median line indicated on rear 2/3 of shield; admedian lines faint except just ahead of rear margin at which point they bifurcate, the inner forks meeting at midline in a slight mark, the outer forks divergent and each forming a bulb-like mark. Submedian lines of obscure dashes. Shield laterally with strong band of granules above coxae; below dorsal tubercle the granules fan out and meet partial rings above rear coxa. Dorsal tubercles 18μ apart; dorsal setae 28μ long, diverging. Foreleg 26μ long; tibia 5μ long, with 7μ seta at 1/3; tarsus 7μ long; claw 8μ long; featherclaw 5-rayed. Hindleg 23μ long, tibia 4μ long, tarsus 7μ long, claw 9μ long. somewhat recurved. Coxae ornamented apically with dashes and granules; first setifeoous coxal tubercles well ahead of second and set slightly ahead of anterior coxal approximation; second setiferous coxal tubercles a little ahead of line across third tubercles. Abdominal thanosome with about 60 rings, complet ly microtuberculate. Microtubercles mostly beadlike and slightly pointed, generally set ahead of ring margin; dorsally the microtubercles elongate just behind shield and on ring margins ahead of telosome. Lateral seta 17μ long, on ring 7; first ventral seta 50μ long, on ring 19; second ventral 14μ long, on ring 36. Telosome with 5 rings; microtubercles fine, on ring edges, abruptly weaker above than on thanosome, elongate below. Third ventral or telosomal seta 22μ long. Accessory seta 6μ long. Female genitalia 17μ wide, 14μ long; coverflap mostly with large granules; seta 16μ long.

Type locality: Santa Fe Provence, Argentina

Collected: Nov. 1, 1967 by Raul H. Quintanilla of the Facultad de Agronomia Catedra de Zoologia Agricola, Buenos Aires

Host: Geoffraea decorticans (Leguminasae) 'chanar'

Relation to host: the mites make tiny pointed galls on the leaflets

Type material: a type slide with the above data retained by the author
a paratype slide sent to the Entomology Research Division Beltsville, Maryland
two paratype slides retained by the author

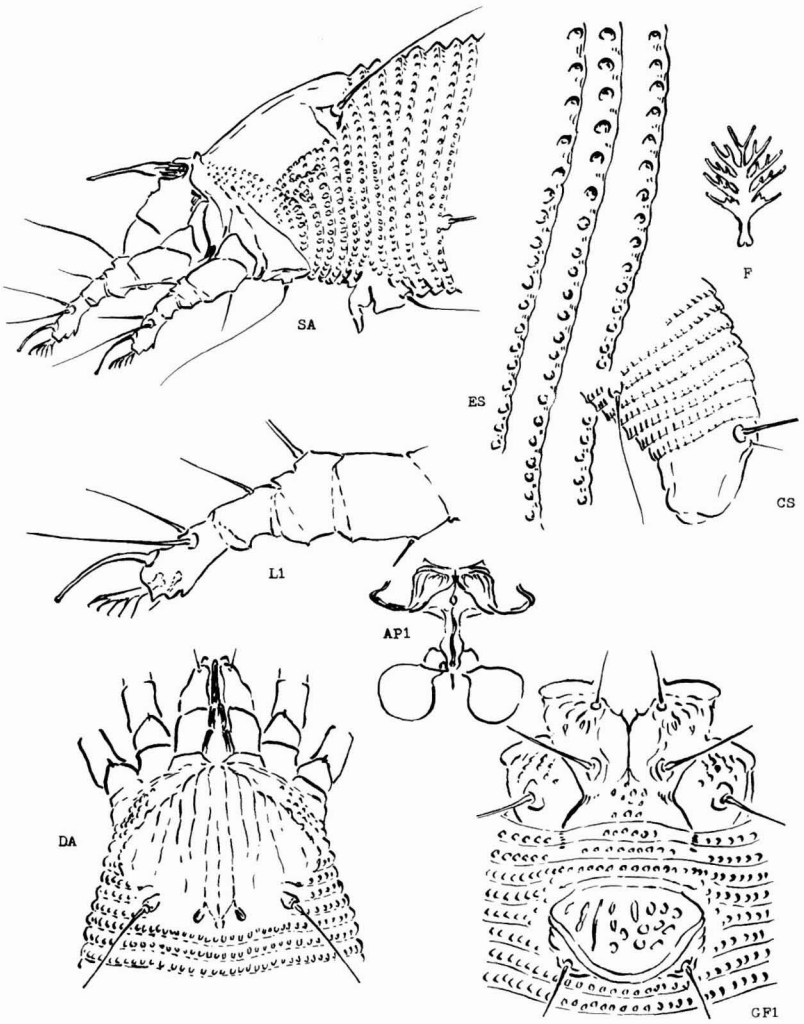

Plate 2 - Aceria geoffraeae, new species

Aceria biopsidia, new species

Plate 3

This species is characterized by the 4-rayed featherclaw, microtubercles rounded apically, and particularly by the shield pattern. This shield pattern is composed of broken lines and granules. The admedian lines are complete but broken and at one such break at the rear 2/5ths they turn centrad from the remainder of the lines. From 2/5 the lines are sinuate, ending divergingly at rear margin. The median line ends in a dart-shaped mark at rear margin. A similar breaking and converging of the admedian lines occurs on the species Aceria escalloniae K., from Argentina, but the break is farther back For the description of escalloniae see Bul Cal. Dept. Agr.33(1):23 Mar. 1944

Female 105µ-120µ long, 30µ-35µ thick; wormlike; color probably light yellowish-white in life. Rostrum 18µ long, projecting ahead and down; antapical rostral seta 2/5µ long. Shield 25µ long, 27µ wide; design of lines of dashes and granules, the lines broken. Median line present on rear half as broken line, ending at rear shield margin in dart-shaped mark. Admedian lines complete from chelicera base, broken, sinuate, the lines curving inward at rear 2/5,almost meeting median;remainder of admedian lines continuing and diverging at rear margin. Submedian lines of granules and more or less obscure due to confusion of granules; three submedian lines more or less apparent ahead of dorsal tubercles. Shield laterally with bands of granules and obscure lines. Dorsal tubercles 16µ apart; dorsal setae 24µ long, diverging. Foreleg 21µ long; tibia 5µ long with 2µ seta at about 2/5; tarsus 5µ long; claw 5µ long; featherclaw 4-rayed. Hindleg 17µ long, tibia 4µ long, tarsus 5µ long, claw 6µ long. Coxae ornamented with granulations; first setiferous coxal tubercles slightly farther apart than second and opposite anterior coxal approximation; second tubercles well ahead of line across third setiferous coxal tubercles.Abdominal thanosome with about 51 rings, completely microtuberculate, the microtubercles rounded off outwardly, touching ring margins above, slightly ahead of margins laterally and below. Microtubercles fading dorsally on last 7-9 rings. Lateral seta 12µ long, on ring 5 behind shield; first ventral seta 37µ long, on ring 18; second ventral 5µ long, on ring 32. Telosome with 5 rings, the microtubercles fainter than on thanosome, smaller and on ring margins with anterior line from each; telosome seta 12µ long. Accessory seta absent. Female genitalia 15µ wide, 12µ long; coverflap with coarse granules basally; with about 12 longitudinal ribs; seta 6µ long.

Type locality: Cagua, State of Aragua. Venezuela

Collected: October 5, 1966 by Ernesto Doreste of the Fundacion Shell

Host: Psidium guajava L. (Myrtaceae) guava

Relation to host: the mites live in the buds

Type material: a type slide with the above data retained by the author
a paratype slide sent to the Entomology Research Division, Beltsville, Maryland
a paratype slide retained by the writer

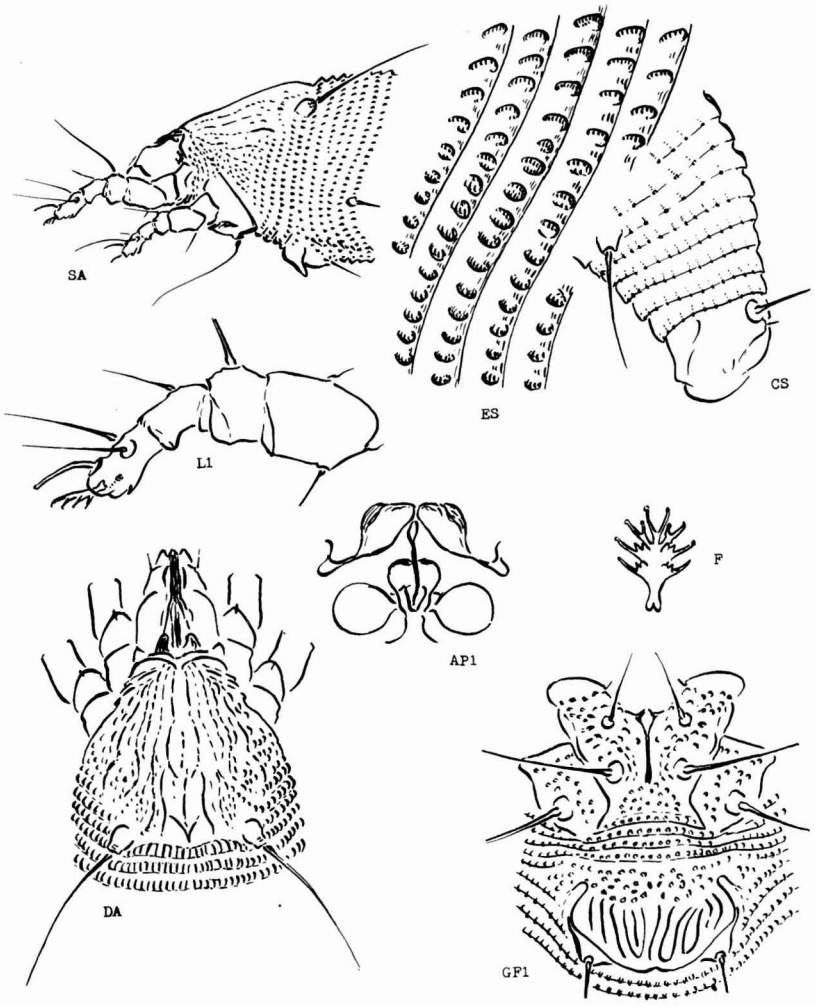

Plate 3 - Aceria biopsidia, new species

Epitrimerus calami, new species

Plate 4

This species has a 4-rayed featherclaw, the anterior shield lobe over the rostrum is broad and blunt, the foretibial seta is at the apical third, and the female genital coverclap has longitudinal ribs in two ranks. The placement of calami in Epitrimerus is due to the shallow subdorsal grooves on the abdomen that converge caudally. Calami does not seem near any other species referable to the genus, but such species as santaluciae (Eriophyid Studies B-19:3, July 19, 1966) which has a 4-rayed featherclaw that is larger, has a blunt and slightly emarginate anterior shield lobe, the foretibial seta at apical 1/3, and the basal portion of the female genital coverflap is separated. Other details such as the position of the dorsal tubercles ,the microtuberculation,and width of the central abdominal ridge, are quite different. Species referred to Epitrimerus have the dorsal tubercles set ahead of the rear shield margin,and more or less prominent subdorsal longitudinal troughs or grooves.Undoubtedly these grooves have arisen on various species independently at various times. For that matter all back ridges and grooves can be considered suspect as far as true relationship of species is concerned.

Female 160µ-195µ long, 38µ-45µ thick, 50µ-57µ wide, elongate fusiform, attenuate and tapering to rear; body probably light yellowish white in life, producing a covering white waxy bloom. Rostrum 28µ long, curved down; antapical seta 9µ long. Shield 52µ long, 56µ wide, subquadrate. Anterior shield lobe over rostrum broad and blunt, lateral lobes bulbous; rear shield margin with produced convexity into anterior middorsal area of abdomen. Shield design faint: median line slightly noticeable in rear convexity; admedians from transverse arcs just inside anterior lobe, the admedians joined by short transverse line at base of lobe,gently curving out and back to middle of shield,becoming faint after mid point,forking between dorsal tubercles,the inner forks meeting anterior end of median line,and outer forks diverging to rear margin.Some lateral lines above coxae.Dorsal tubercles well ahead of rear shield margin,23µ apart;dorsal setae 2µ long.Foreleg 38µ long; tibia 9µ long,with 9µ seta at 2/3;claw 5µ long,nearly straight,small knob;featherclaw small,4-rayed.Hindleg 33µ long, tibia 7µ long, tarsus 7.5µ long, claw 5µ long. Coxae unornamented;anterior coxae connate along moderately long line, coxae divergent.First setiferous coxal tubercles a little ahead of anterior coxal approximation and farther apart than second;second tubercles a little ahead of line across third tubercles. Abdominal thanosome with about 50 rather narrow tergites,lacking microtubercles,on anterior part curving strongly back around rear shield projection. Subdorsal longitudinal troughs faint, extending from area back of dorsal tubercles and converging to rear,fading.Tergites laterally forming a broad ridge.Sternites 75-80 in number,set with fine microtubercles.Lateral seta 29µ long,on sternite 8 behind shield;first ventral seta about 32µ long,on sternite 26; second ventral seta 30µ long, on sternite 49. Telosome with 7 rings, the microtubercles on ring margins, fine laterally and dorsally, elongate ventrally; telosomal seta 20µ long. Female genitalia 20µ wide, 15µ long; coverflap with longitudinal ridges in two ranks; anterior rank in two groups of 6-8 each; rear rank 12-14; seta 9µ long.

Type locality: Maroochy Horticultural Research Station, near Nambour, Queensland

Collected: Sept. 23, 1968 by J. J. Davis, Research Entomologist

Host: Calamus australis Mart. (Palmae) lawyer cane

Relation to host: the mites form yellow-brown subcircular patches, 5 to 10 mm across on the undersides of the leaves, the white waxy bloom tending to cover mites and brown area

Type material: a type slide retained by the author
two paratype slides sent to J. J. Davis
two paratype slides sent to the Entomology Research Division Beltsville, Maryland
five paratype slides retained by the author

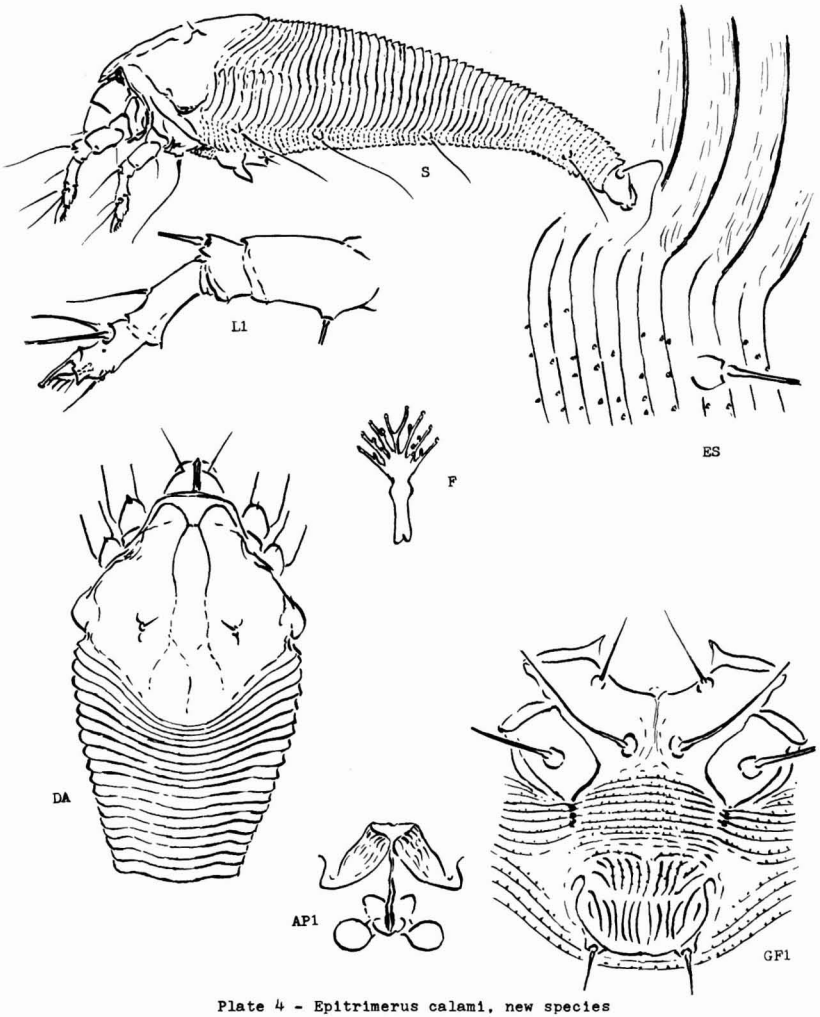

Plate 4 - Epitrimerus calami, new species

Rhombacus asclepiadii, new species

Plate 5

The new species is similar to Rhombacus morrisi K., the genotype, but differs in detail. For example the new species has sharper anterior shield lobe points, the tergal microtubercles are much less prominent, the anterior coxae are more broadly joined. The host of the new species is narrow-leaf cotton bush, Asclepias fruticosa L., a native of Africa now widespread in tropical countries. The genus Rhombacus, with its recurved claw on the second leg, is known only from Australia up to the present time. The genotype of Rhombacus lives on Eucalyptus, a tree which is an Australian native and belongs to a plant order far removed from Asclepias. Rhombacus asclepiadi probably has a native Australian host related to Asclepias. J. J. Davis of the Department of Primary Industries, Nambour, Queensland, supplied the plant name and related data.

Female 145µ-170µ long, 50µ thick; 75µ-80µ wide; broad-fusiform; color in life probably yellowish-white. Rostrum 30µ long, projecting down; antapical seta 8µ long. Shield 55µ long, about 78µ wide, anterior lobe over rostrum of moderate length, truncate anteriorly with four spur-like projections, the outer points sharp and somewhat divergent. Shield with no particular design, the dorsal tubercles situated in about the center of a curved longitudinal line on each side of center of shield; an irregular transverse line at central rear margin. Shield lobes laterally with a series of small scollops along edge; granulations and partial rings above rear coxae. Dorsal tubercles 23µ apart; dorsal setae 3µ long, projecting up and diagonally inward and ahead. Legs slender. Foreleg 35µ long; tibia 9µ long, with 12µ seta at front apex; tarsus 8µ long; claw 6µ long, knobbed; featherclaw 5-rayed. Hindleg 36µ long, tibia 9µ long, tarsus 7µ long, claw 7µ long. Coxae ornamented with curved lines of granules; anterior coxae broadly joined, lacking definite sternal line; first setiferous coxal tubercles farther apart than second and opposite anterior coxal approximation; second coxal tubercles on the line across third coxal tubercles. Abdominal thanosome with about 15 tergites, the microtubercles faint dorsally, elongate laterally. About 51 sternites set with fine microtubercles that reach ring margins, tending to become more elongate toward rear. Lateral seta 20µ long, on sternite 7; first ventral seta 45µ long, on sternite 20; second ventral seta 22µ long, on sternite 37. Telosome with 6 rings, the dorsal microtubercles faint anteriorly, becoming a series of fine sharp points projecting caudad from edges of rear three rings; ventrally the microtubercles more elongate, especially on last two rings. Third ventral or telosomal seta 27µ long. Accessory seta absent. Female genitalia 23µ wide, 20µ long; ornamented with curved lines of granules and short dashes; basal part of coverflap divided by a central longitudinal line and concentric lines of granules on each side; this followed by two transverse curved lines, the coverflap with converging lines of granules and dashes on rear part; seta 16µ long.

Type locality: Gympie, Queensland

Collected: July 4, 1968 by D. Smith and sent by J. J. Davis

Host: Asclepias fruticosa L. (Asclepiadaceae) narrow-leaf cotton bush

Relation to host: the mites are leaf vagrants

Type material: a type slide retained by the author
two paratype slides sent to J. J. Davis
two paratype slides sent to the Entomology Research Division
Beltsville, Maryland
five paratype slides retained by the author

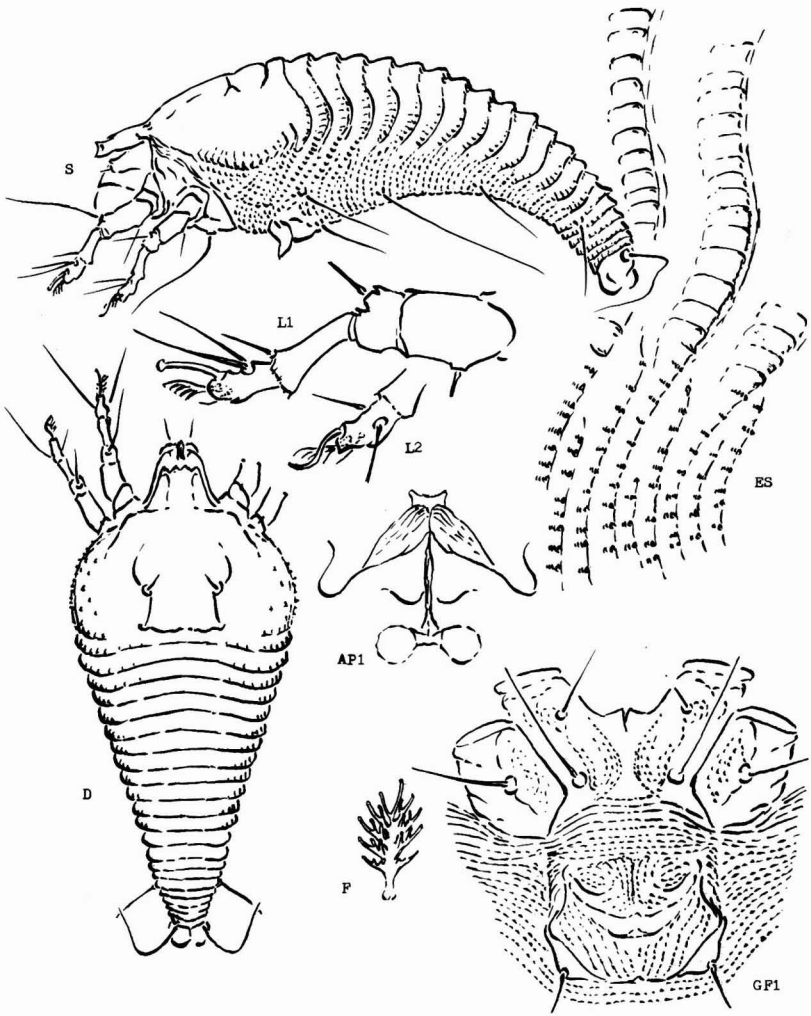

Plate 5 - Rhombacus asclepiadii, new species

Mesalox abathus, new species

Plate 6

The genotype of Mesalox is tuttlei K., which occurs on Virginia creeper, Parthenocissus, in Michigan, and on grape in Kansas. On it the admedian lines are convergent ahead of the rear shield margin, and the foretibia has a short seta at about 1/3. The new species, on cashew (Anacardium) in Brazil, has admedian lines that are divergent ahead of the rear shield margin, and the foretibia lacks a seta but has a short spine at 2/3.

Female 135μ-142μ long, 35μ-40μ thick, 40μ-45μ wide; fusiform; color in life probably light yellowish. Rostrum 20μ long, projecting down; antapical seta about 5μ long. Shield 34μ-37μ long, 38μ-41μ wide, subtriangular with the anterior suprorostral lobe acute in dorsal view, downcurved in side view with convex outline and ending in spine-like projection ahead of rostrum. Median shield line faint or absent. Admedian lines from sides of acute anterior lobe, sinuate, diverging to about 1/3, converging to about 3/4, then diverging to rear margin; variable in separation centrally; ending in strong mark at rear margin, a faint line curving forwards from this rear margin ending and extending up past dorsal tubercle. Shield laterally with two strong longitudinal lines above coxae; two or three partial rings with granules above coxae. Dorsal tubercles 32μ apart; dorsal setae 11μ long, strongly diverging. Foreleg 24μ-26μ long; tibia 6μ long, lacking seta but with short spine at 2/3; tarsus 6μ long; claw 5-1/2μ long, curved down, knobbed; featherclaw 4-rayed. Hindleg 22μ long, tibia 4μ long, tarsus 5μ long, claw 5μ long. Coxae slightly ornamented with fine dashes; first setiferous coxal tubercles somewhat ahead of anterior coxal approximation and farther apart than second; second tubercles ahead of line across third coxal tubercles. Abdomen with about 38 thanosomal tergites and 53 thanosomal sternites. Tergites with subdorsal low ridges probably bearing wax in life; these ridges gradually converging to about 24th or 26th tergite. Between these subdorsal ridges a slight trough is somewhat convex just behind shield but becomes flat to rear. Tergites with lateral longitudinal ridge from lower lateral angle of shield and extending nearly to telosome. Tergites lacking appreciable microtubercles except on lower parts of lateral ridge. Sternites with fine microtubercles. Lateral seta on about sternite 10 and 15μ long; first ventral seta on sternite 22, 46μ-52μ long; second ventral seta 12μ long, on sternite 35. Telosome with 5 rings, bearing fine granules on nargins; seta 13μ long. Accessory seta absent. Female genitalia 20μ wide, 12μ long; coverflap with 10-14 longitudinal ribs; seta 14μ long.

Male 125μ-135μ long.

Type locality: Campinas, SP, Brazil

Collected: August 16, 1967, by Luiz Chiavegatto, Eng. Agr. Instituto Agronomico

Host: Anacardium occidentale L. (Anacardiaceae) cashew

Relation to host: the mites are leaf vagrants or rust mites

Type material: a type slide with the above data retained by the author
a paratype slide sent to the Entomology Research Division, Beltsville, Maryland
a paratype sent to the Secao de Entomologia, Instituto Agronomico, care of the collector
three paratypes retained by the author

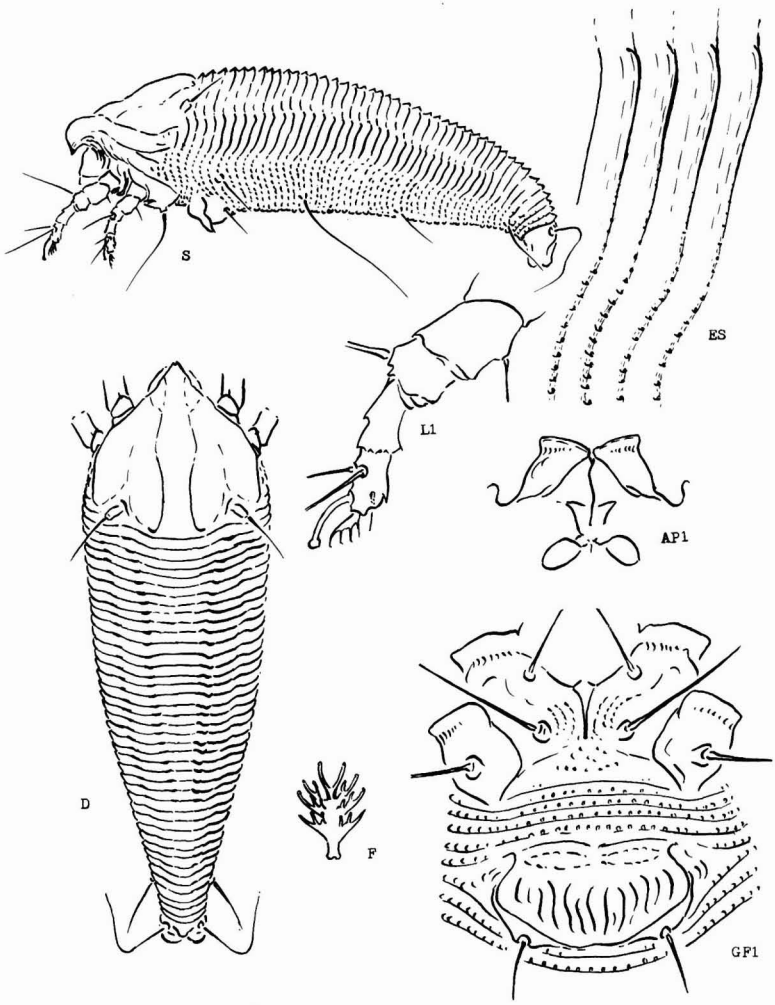

Plate 6 - Mesalox abathus. new species

Vittacus, new genus

Similar to Aciota (see Occ. Papers, Bur.Ent., Cal.Dept.Agr. #1, p.7 May 8, 1959) but the thick transverse back plates which form a slight middorsal longitudinal furrow on the nearly flat back are different from that genus. Aciota also has lateral tergal lobes with an upper point that are lacking on Vittacus. Mesalox has a more noticeable middorsal furrow.

Fusiform mite, somewhat attenuate, with abdominal rings strongly divided laterally into tergites and sternites. Rostrum small, with short form oral stylet.Shield acuminate anteriorly, with strong downcurved lobe over rostrum base and slight apical indentation; dorsal tubercles widespread, somewhat produced, on rear shield margin, directing dorsal setae divergently to rear. Three pair of coxal setae present; anterior coxae separated by sternal apodeme. Legs with all usual aetae; foretibiae with both seta and associated spine.Abdominal thanosome with moderately broad tergites, covering 2-4 sternites laterally;dorsally each tergite bearing transverse thickened band, but nearly flat,becoming more concave centrally toward rear; laterally each band forming a subdorsal ridge. Just above sternites a longitudinal ridge with elongate microtubercles. All usual abdominal setae present. Telosome with about 5 normal rings.Female genitalia not appressed to coxae; internal anterior apodeme of moderate anterior length.

The name is derived from vitta for the transverse bands, and acus as a contraction of Acarus.

Genotype - Vittacus mansoni, new species

Vittacus mansoni, new species

Plate 7

The author takes pleasure in naming this mite for D. C. M. Manson of the Department of Agriculture, Levin, New Zealand, who sent this mite for study.

Female 160μ-220μ long, 52μ-56μ wide, 35μ-38μ thick; fusiform; color light yellowish-white. Rostrum 17μ long, directed down; antapical seta 5μ long. Shield 42μ-48μ long, 35μ-42μ wide, elongate-triangular in dorsal view, anterior lobe acuminate,slightly indented apically; shield lobe in lateral view strongly convex, with lateral groove above chelicerae. Shield design obscure; admedian lines hardly indicated; rear central convex lobe between dorsal tubercles bounded anteriorly by transverse line from inner anterior bases of dorsal tubercles. Shield laterally with upper longitudinal line from upper side of anterior lobe, ending just below dorsal tubercle; longitudinal band of granules above coxae ending in partial rings at rear edge. Dorsal tubercles somewhat produced,28μ apart; dorsal setae 19μ long, divergent to rear. Foreleg 32μ long; tibia 8μ long, with 5μ seta near base and short spine at 1/3; tarsus 7μ long; claw 6μ long, with slight knob; featherclaw 4-rayed. Hindleg 29μ long, tibia 7μ long, tarsus 6μ long, claw 6.5μ long. Coxae ornamented with subapical rows of granules and lines of short dashes placed more basally; anterior coxae with rather long sternal apodeme between; first setiferous coxal tubercles ahead of second and opposite anterior coxal approximation; second tubercles ahead of line across third setiferous coxal tubercles. Abdominal thanosome with 22 tergites and about 50 sternites; tergites with microtubercles only on lateral ridge on which they are elongate; microtubercles on sternites elongate and bead-like, usually touching ring margins. Lateral seta 10μ long, on sternite 7; first ventral seta 42μ long, on sternite 19; second ventral 9μ long, on sternite 33. Telosome with 6 rings, no microtubercles above, sides and venter with fine microtubercles on ring margins preceeded by fine line; seta 21μ long. Accessory seta absent. Female genitalia 22μ wide, 13μ long;coverflap with granules basally and 10-12 longitudinal ribs apically; seta 12μ long.

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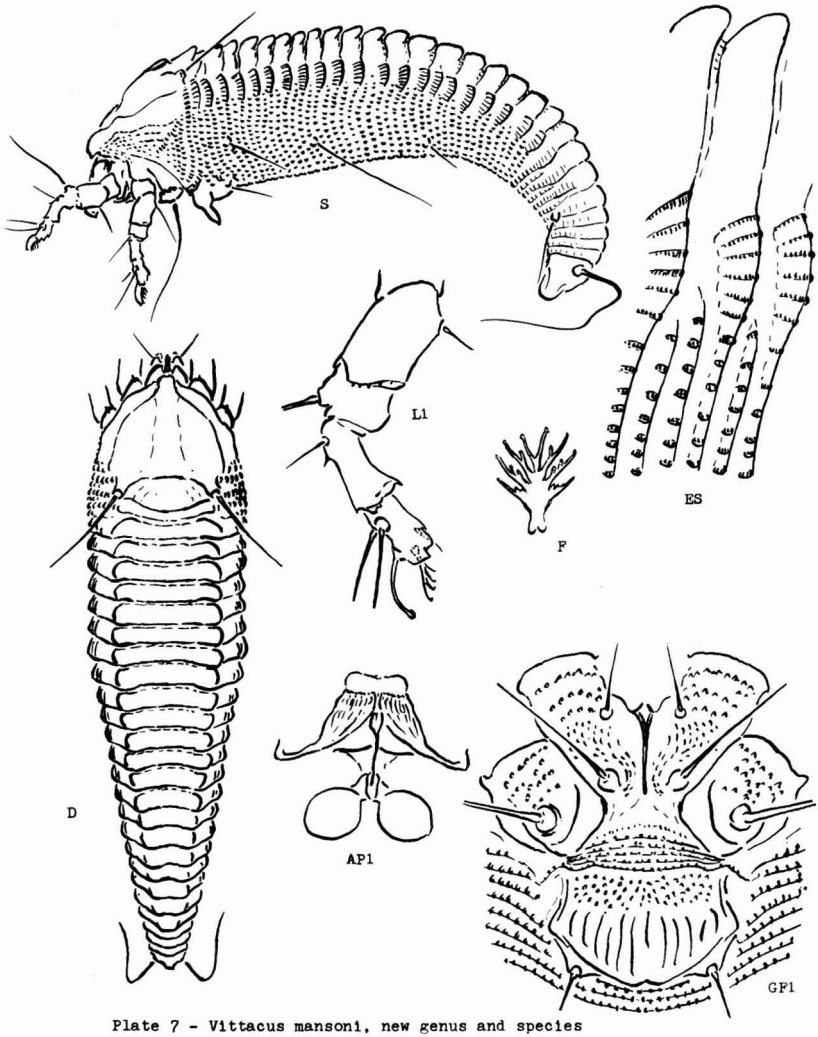

Plate 7 - Vittacus mansoni, new genus and species

Catachela, new genus

This genus is similar to Dechela of the Cecidophyinae by having the foreclaw displaced downward below the empodium (featherclaw). I differs from Dechela by not having closely appressed genitalia and in having the anterior internal genital apodeme of moderate anterior length. Catachela is similar to Acalitus of the Eriophyinae by lacking the foretibial and forefemoral seta. Catachela is here referred to the Phyllocoptinae since it has a short but broad anterior lobe over the rostrum base. For reference to Dechela see Eriophyid Studies B-13:3, Mar. 2, 1965, and for Acalitus see Eriophyid Studies B-14:2, May 17, 1965. The genus name is from chela meaning claw and cata meaning down.

Body wormlike with short broad anterior shield lobe over rostrum. Body rings narrow, slightly more numerous ventrally. Short oral stylet. Shield with dorsal tubercles on rear margin directing dorsal setae diverently to rear. forelegs lacking the forefemoral and foretibial seta; claw displaced down below the empodium. Hindlegs normal. Forecoxae fused, lacking sternal line or apodeme; second setiferous coxal tubercles closer to eachother than the first pair are to eachother. Abdomen with all usual setae except accessory seta. Female coverflap granular basally and with transverse arches convex to rear; internal apodeme of moderate anterior length.

Genotype - Catachela machaerii, new species

Catachela machaerii, new species

Plate 8

Female 190µ-205µ long, 55µ thick, wormlike; color in life probably light yellowish-white. Rostrum 23µ long, projecting down; antapical seta not found. Shield 40µ long, 48µ wide, semicircular in anterior outline from above; a very short, broad anterior lobe over rostrum base. Median shield line complete, irregular, meeting cross lines from admedians at anterior 1/6, at 1/3, 2/3, and with slight line across at rear margin. Admedian lines complete from anterior lobe, gradually diverging to rear, irregular, outcurved at rear margin. A submedian line from admedians at nearly 1/2, curving out and back toward dorsal tubercles, forking and becoming weak in front of tubercles. Shield laterally with indications of a network of lines; curved lines of granules above coxae. Dorsal tubercles 28µ apart, on rear margin; dorsal setae diverging to rear. Foreleg 32µ long; tibia 4.5µ long; tarsus 9µ long, the 5µ claw straight, below featherclaw; featherclaw 8-10 rayed. Hindleg 27µ long, tibia 4µ long, tarsus 7µ long, claw 12µ long, curved. Coxae ornamented with granulations; forecoxae fused centrally; first setiferous coxal tubercles about mid point on coxae and farther apart than second tubercles; second tubercles well ahead of line across third tubercles. Abdomen with about 60 rings dorsally and 65 ventrally on the thanosome. Rings completely microtuberculate, the microtubercles dorsally somewhat elongate, produced to rear, touching rear margin; lateral and ventral microtubercles tending to be to be ahead of ring margins, bead-like. Lateral seta 19µ long, on ring; first ventral seta 55µ long, on ring 21; second ventral 26µ long, on ring 43. Telosome with 6 rings, fine microtubercles on margins; seta 30µ long. Female genitalia 25µ wide, 18µ long; coverflap granular basally, two concentric cross rings ahead of rear margin; seta 16µ long.

Male 180µ-195µ long.

Type locality: Piracicaba, Brazil

Collected: July 22, 1968 by P. R. Reis and sent by C. J. Rossetto, Eng. Agr. Instituto Agronomico

Host: Machaerium villosum Vogel (Leguminosae) a vine

Relation to host: the mites occur on the undersurface of the leaves

Type material: a type slide and two paratype slides, with the above data, retained by the author.
a paratype slide each sent to Carlos J. Rossetto and to the Entomology Research Division, Beltsville, Maryland

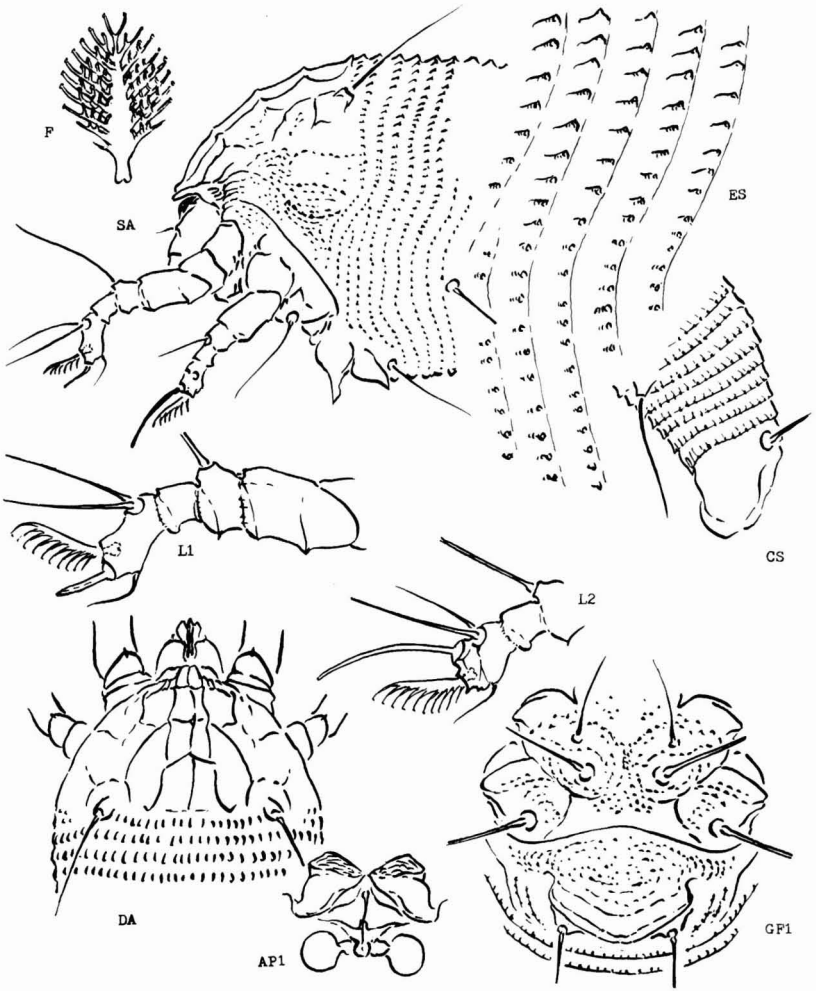

Plate 8 - Catachela machaerii, new genus and species

Floracarus talisiae, new species

Plate 9

This species has a 4-rayed featherclaw. Two previous 4-rayed species have been assigned to Floracarus. These are calonyctionis K., the genotype, and fleschneri K. Talisiae differs from both of these by lacking granulations on the female genital coverflap. Calonyctionis has granular femora and the claw on the foretarsus projects inward from the inner side. Fleschneri seems closer to the new species but has more microtubercles on the sternites.

Female 150µ-160µ long, 50µ-55µ thick, fusiform, strongly tapering to rear; color in life yellow. Rostrum 23µ long, projecting down; antapical seta close to apex, 3µ long. Shield 36µ long, 50µ across, semicircular in both anterior outline and in lateral view, with a small lobe over rostrum. Shield design a network: median line complete, stronger to rear, crossed by transverse lines at anterior 1/5, at 1/3, and just behind middle. Admedian lines complete, stronger to rear, curving diagonally out and back from anterior lobe center, meeting a lateral transverse line at about 1/5, a second at 1/3, converging to transverse line just beyond middle, diagonally diverging to rear margin. A submedian line from side of anterior shield edge, sinuate, extending back toward dorsal tubercle and meeting transverse lines at 1/5 and 1/3, dividing ahead of dorsal tubercle, the inner fork curving around tubercle and reaching rear margin, the outer fork weak and running back outside tubercle. Lateral shield line from submedian line between first and second transverse lines, extending back to rear lateral shield angles and forming lateral cells above coxae by downward directed lines. Dorsal tubercles well ahead of rear shield margin, 29µ apart; dorsal setae 6µ long, projecting up. Foreleg 18µ long, tibiotarsus 5µ long, claw 5µ long, knobbed, featherclaw 4-rayed. Hindleg 16µ long, tibiotarsus 6µ long, claw 6µ long. Coxae unornamented; anterior coxae narrowly connate centrally; second setiferous coxal tubercles well ahead of line across third tubercles. Abdominal thanosome with about 22 tergites which are without microtubercles. Sternites about 34 in number, the microtubercles more or less elongate, acuminate to rear, usually set ahead of rear ring margin. These microtubercles absent from longitudinal bands extending back from sides of genitalia and fading just beyond second ventral seta. Lateral seta 16µ long, on 4th sternite behind shield; first ventral seta on sternite 10, 40µ long; second ventral 29µ long, on sternite 19. Telosome with 6 rings, completely set with fine microtubercles on margins; seta 13µ long Accessory seta absent. Female genitalia 24µ wide, 16µ long; lacking granules but with curved transverse lines on coverflap; seta 6µ long.

Type locality: San Mateo, State of Aragua, Venezuela

Collected: October 19, 1967 by Ernesto Doreste of the Fundacion Shell

Host: Talisia olivaeformis HBK. (Sapindaceae)

Relation to host: these are rust mites

Type material: a type slide with the above data retained by the author
a paratype slide sent to the Entomology Research Division, Beltsville, Maryland
four paratype slides retained by the author

Vittacus mansoni, continued from page 13

Type locality: Prices Valley, Banks Peninsula, New Zealand, where there is a forest remnant.

Collected: April 12, 1956 by A. J. Healy

Host: Urtica ferox Forst. (Urticaceae) a nettle

Relation to host: the mites form wooly bead galls on the leaves with the openings usually on the undersurface. The galls average about one millimeter in diameter.

Type material: a type slide sent to D. C. M. Manson, the slide bearing the above data
a paratype slide also sent to Manson
a paratype slide sent to the Entomology Research Division, Beltsville, Maryland
five paratype slides retained by the author

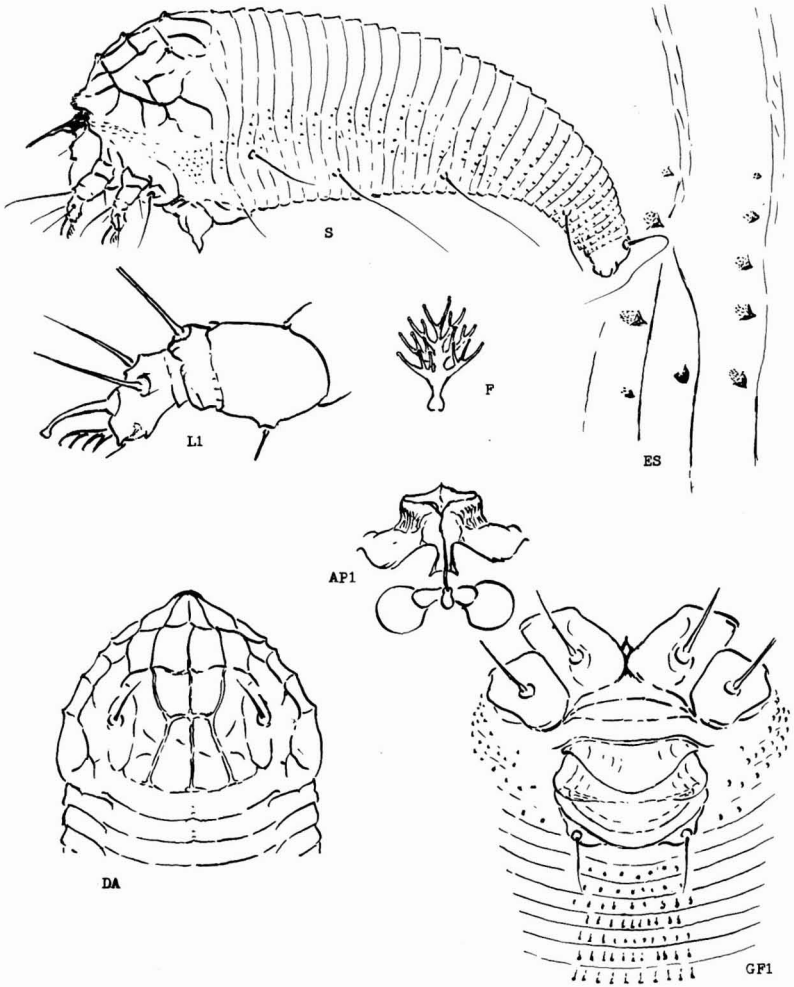

Plate 9 - Floracarus talisiae, new species

Colopodacus glochidionis, new species

Plate 10

Colopodacus is the only Nothopodine genus so far described that has the first coxal setiferous tubercle. The genotype is africanus K. from Kivu coffee. The new species differs from africanus by having a 4-rayed featherclaw, which is one less ray. It also differs by having granular forecoxae and fewer network cells around and beyond the dorsal tubercles.

Female 140µ-150µ long, 48µ thick, 60µ wide; fusiform; color in life probably lihgt yellowish. Rostrum 21µ long, projecting down; antapical seta minute. Shield 44µ long, 60µ wide, semicircular in anterior outline from above, in side view flattened above and sloping anteriorly. Shield design with median line absent on frontal slope before anterior cross line, widening to rear and ending just within rear shield margin; median line receiving a cross line from admedians at about 1/2 and at 3/4, connected to admedians by cross line ahead of rear margin. Admedian lines complete behind extreme part of anterior lobe, diverging anteriorly and sinuate from first cross line, the indentations at cross lines at 1/2, 3/4 and just ahead of rear margin. A subparallel submedian line just outside the admedians and lateral to that an unmarked area just inside the dorsal tubercle, this smooth area extending caudad into the first 3 or 4 thanosomal rings. Laterally the shield with longitudinal line running to rear and curving upward below dorsal tubercle; a lower line below this forks above rear coxa and reaches rear margin. Dorsal tubercles 45µ apart, well ahead of rear margin; dorsal setae 8µ long, projecting laterally. Femora on both legs set with minute spinules on outer side. Foreleg 23µ long; tibiotarsus 5µ long; claw 4µ long, with expanded tip flattened ventrally; featherclaw 4-rayed. Hindleg 19µ long, tibiotarsus 5µ long, claw 5µ long and of same form as on anterior leg. Anterior coxae granular centrally with no sternal line or apodeme, diverging apically; first setiferous coxal tubercles opposite anterior coxal approximation and closer together than second; second tubercles ahead of line across third tubercles. Abdominal thanosome with about 48 rings, subequal dorsoventrally, smooth above but microtuberculate below. Microtubercles as fine beadlike granules anteriorly and slightly ahead of rear margins, gradually becoming elongate toward cauda and pointed; these microtubercle areas rising toward rear. Lateral seta 18µ long, on ring 7 behind shield; first ventral seta 42µ long, on ring 20; second ventral 8µ long, on ring 33. Telosome with 6 rings, set with fine microtubercles, weaker above, more elongate and stronger below; seta 13µ-15µ long. Accessory seta absent. Female genitalia 23µ wide, 19µ long, coverflap basally granular, a curved cross line subapically and suggestions of ribs toward rear edge; seta 8µ long.

Type locality: Palmwoods, Queensland

Collected: July 4, 1968, by D. Smith, and sent me by J. J. Davis

Host: Glochidion supra-axillare Benth. (Euphorbiaceae) cheese tree

Relation to host: the mites are leaf vagrants causing no apparent damage

Type material: a type slide with the above data, retained by the author
a paratype slide sent to J. J. Davis, Research Entomologist Dept. of Primary Industries, at Nambour, Queensland
a paratype slide sent to the Entomology Research Division, Beltsville, Maryland

AP1 - Internal female genital structures
CS - Lateral caudal section of mite
D - Dorsal diagram of mite
DA - Dorsal diagram of anterior section
ES - Lateral skin structures
F - Empodium or featherclaw
GF1 - External female genitalia and coxae from below
L1 - Left anterior leg
L2 - Left second leg
S - Diagram of side of mite
SA - Anterior view of side of mite

Telosome - caudal section of mite including third ventral or telosomal seta
Thanosome - abdomen from rear shield margin to telosome

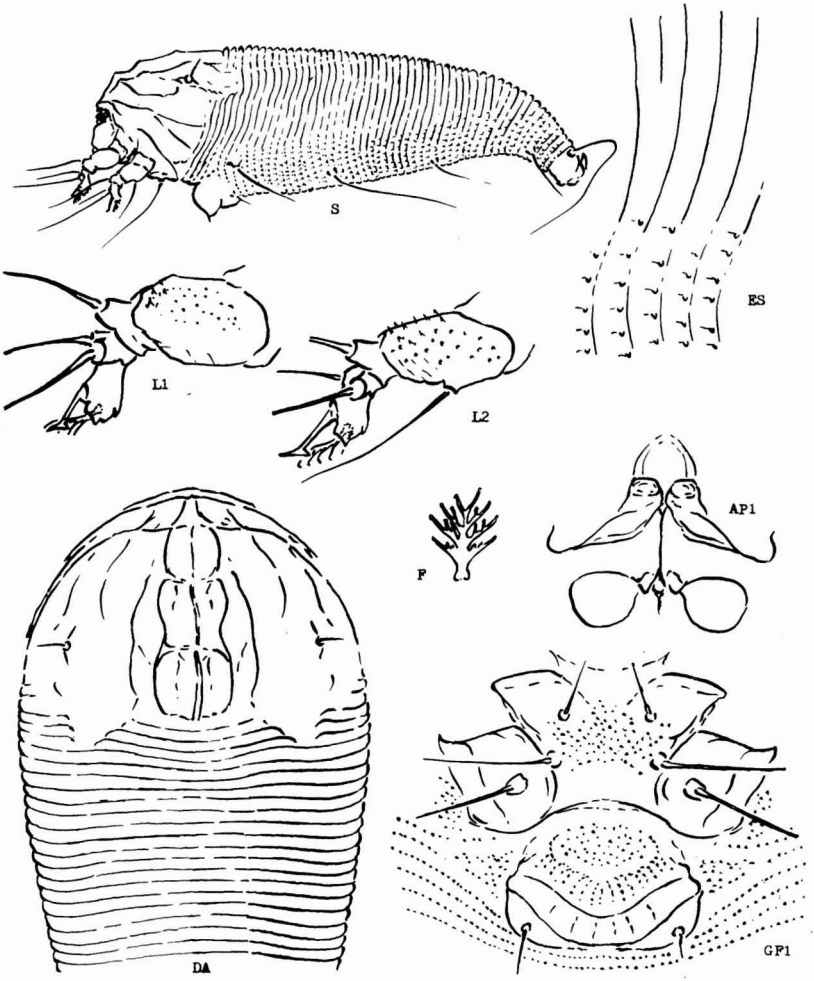

Plate 10 - Colopodacus glochidionis, new species